

FEATURES

- For surface mounted applications
- Ultra fast switching for high efficiency
- Low reverse leakage
- Glass passivated chip junction
- Built-in strain relief, ideal for automated placement
- High forward surge current capability
- Plastic material used carries Underwriters Laboratory Classification 94V-0



SOD-123FL

MECHANICAL DATA

- Case: SOD-123FL Molded plastic
- Terminals: Pure tin plated, lead free
- Polarity: Indicated by cathode band
- Weight: 11.5 mg (approx.)



Cathode

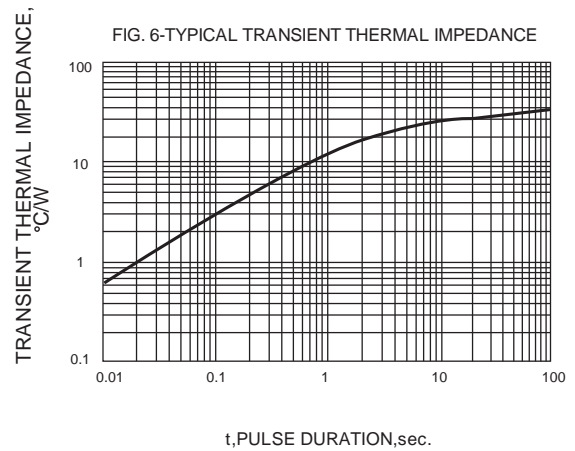
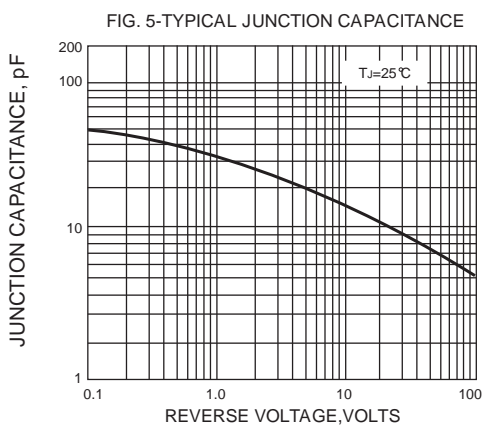
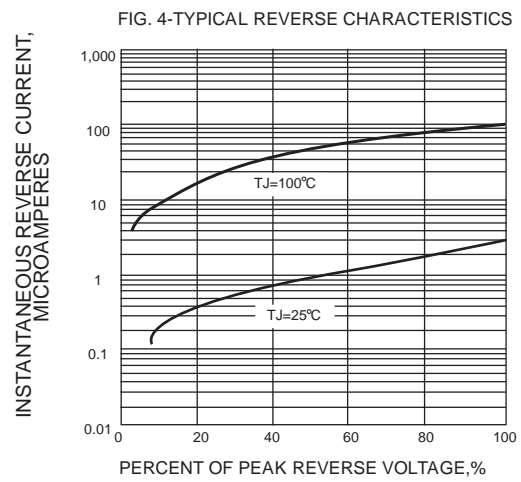
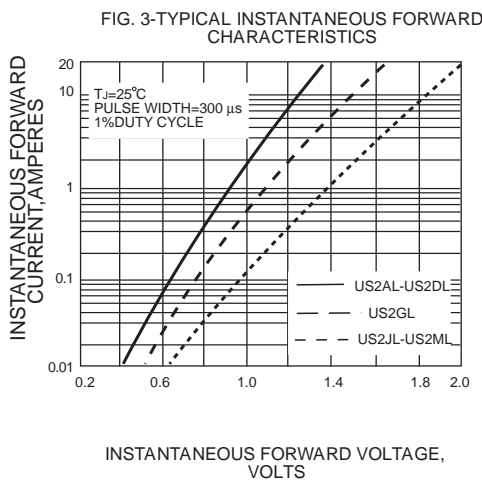
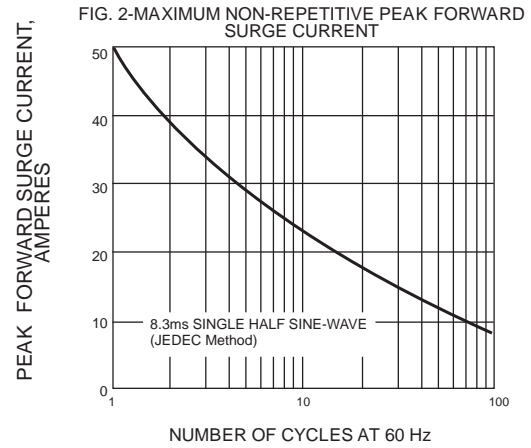
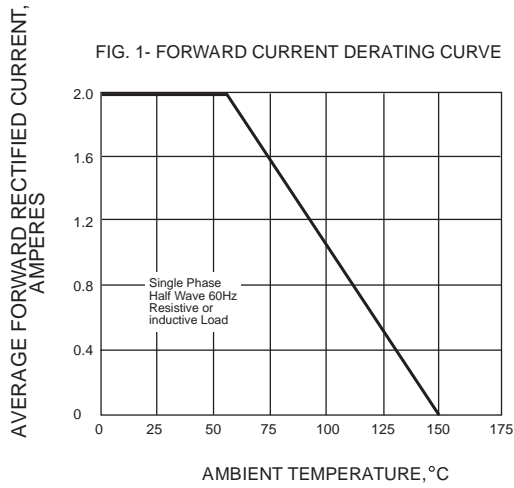
MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate current by 20%.

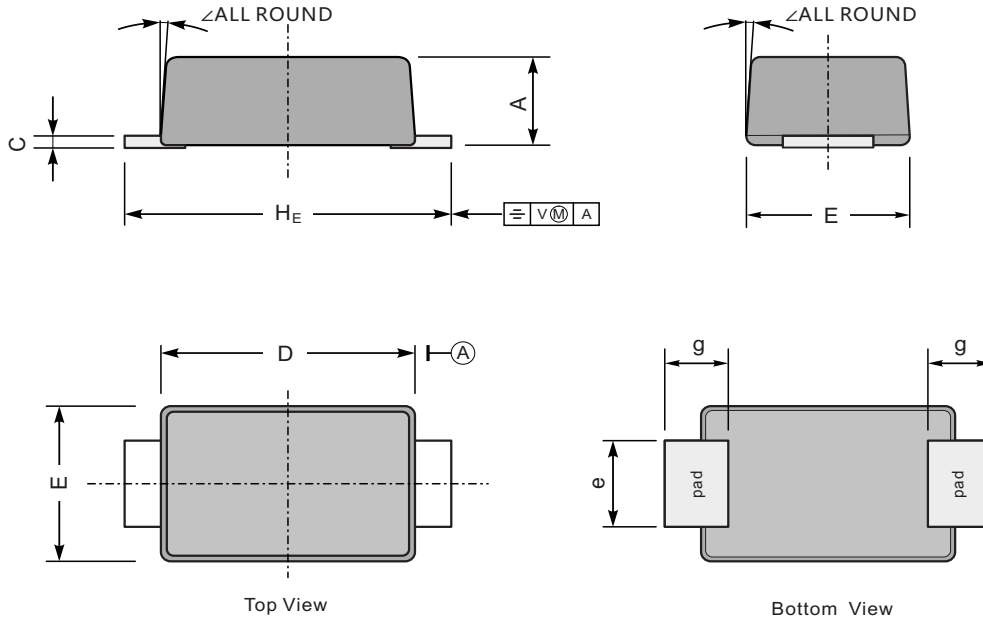
Parameter	Symbol	US2AL	US2BL	US2DL	US2GL	US2JL	US2KL	US2ML	Unit
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current at $T_A=75\text{ }^\circ\text{C}$	$I_{F(AV)}$	2.0							A
Peak Forward Surge Current 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC)	I_{FSM}	50.0							A
Maximum Instantaneous Forward Voltage at 2 A	V_F	1.0		1.3		1.68		V	
Maximum DC Reverse Current at Rated DC Blocking Voltage	I_R	$T_A = 25\text{ }^\circ\text{C}$		5.0				μA	
		$T_A = 100\text{ }^\circ\text{C}$		50.0					
Maximum reverse recovery time (NOTE1)	t_{rr}	50			75			nS	
Typical Junction Capacitance (NOTE2)	C_J	15							pF
Maximum Thermal Resistance (NOTE3)	$R_{\theta J}$ R_{ajc}			75.0				$^\circ\text{C/W}$	
				22.0					
Operating and Storage Temperature Range	$T_{J, TS}$	- 50 + 150							$^\circ\text{C}$

Note: 1.Reverse recovery condition $I_F=0.5A, I_R=1.0A, I_{rr}=0.25A$
 2.Measured at 1MHz and applied reverse voltage of 4.0V D.C.
 3.P.C.B. mounted with 0.2x0.2"(5.0x5.0mm) copper pad areas

Typical Characteristics



SOD-123FL Package Outline Dimensions



UNIT		A	C	D	E	e	g	HE	∠
mm	max	1.1	0.20	2.9	1.9	1.1	0.9	3.8	7°
	min	0.9	0.12	2.6	1.7	0.8	0.7	3.5	
mil	max	43	7.9	114	75	43	35	150	
	min	35	4.7	102	67	31	28	138	